

### **REMARKS**

This Amendment is submitted in reply to the Office Action dated October 3, 2003. Applicants respectfully request reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

Upon entry of the foregoing Amendment, Claims 1, 3-13, 15-26 and 28-33 are pending in the application. The amendments are believed to introduce no new matter, and their entry is respectfully requested. Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

#### **Summary of the Examiner's Rejections**

Claims 1-5, 8-12, 14-19, 21-25 and 27-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Turner (US 6,340,589) or Elsener (US 6,555,792) in view of Ealer (US 5,149,484) and Louks (US 5,006,368).

Claims 6-7, 13, 20 and 26 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Summary of Amendment**

Applicants have cancelled Claims 2, 14 and 27 (without prejudice), amended Claims 1, 6, 8, 11, 13, 18, 20, 23 and 26 and added Claims 30-33 to more particularly define the present invention.

#### **Remarks regarding objected Claims 6, 13, 20 and 26**

Claims 6, 13, 20 and 26 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have amended these claims to include all of the limitations of the base claim and any intervening claims. Accordingly, Applicants respectfully request reconsideration of the outstanding objection and allowance of amended independent Claims 6, 13, 20 and 26 and associated dependent Claim 7.

#### **Remarks regarding § 103(a) rejections**

Applicants respectfully submit that amended independent Claims 1, 11, 18 and 23 are patentable over Turner, Elsener, Ealer and Louks. The claimed invention as recited in amended independent Claim 1 (for example) follows:

1. A microplate, comprising:  
a frame including a plurality of wells formed therein, said frame is manufactured from a thermoplastic material that has been mixed with a non-toxic surface active material that can enhance a lubricious property of a surface of said frame which makes it easier to remove said frame from a thermocycler, wherein said non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of said non-toxic surface active material into the wells of said frame during the operation of the thermocycler (emphasis on the distinguishing limitations).

Independent Claims 8, 18 and 23 contain the same or similar distinguishing limitations as amended independent Claim 1.

The teachings of Turner, Elsener, Ealer and Louks differ significantly from the present invention as recited in amended independent Claim 1 in several respects. First, the amended independent Claim 1 recites a limitation where a frame is manufactured from a thermoplastic material mixed with a non-toxic surface active material that can enhance a lubricious property of a surface of the frame which makes it easier to remove the frame from a thermocycler and where the non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of the non-toxic surface active material into the wells of the frame during the operation of the thermocycler. Turner and Elsener do not disclose a microplate made in part by a non-toxic surface active material as claimed in the present invention. And, Ealer and Louks fail to mention or describe the importance of the terms "non-toxic" or "toxic" as they relate to a surface active material as used in the present invention and they also fail to disclose where the non-toxic surface active material has a percentage of weight relative to the thermoplastic material which was determined in order to minimize extraction of the non-toxic surface active material into the wells during the operation of a thermocycler as claimed in the present invention. As can be readily appreciated by those skilled in the art, it is important to those who use the claimed microplate that the extraction of the non-toxic surface active material into the wells needs to be minimized if not eliminated during the operation of the thermocycler so as not to affect the contents within the wells of the microplate. Thus, the percentage of weight of the non-toxic surface active material relative to the weight of the thermoplastic is a critical aspect of the present invention of which this limitation is not disclosed in Turner, Elsener, Ealer and Louks.

Second, Applicants respectfully submit that Turner and Elsener can not be properly combined with Ealer and Louks to teach the limitations in amended Claim 1. Because, Turner and Elsener each describe a microplate that is made entirely from a thermoplastic material. And, Turner and Elsener do not mention where a non-toxic surface active material can be added to a thermoplastic material to enhance a lubricious property of a surface of the microplate which makes it easier to remove the microplate from a thermocycler as claimed in

the present invention. In fact, Elsener teaches away from the present invention by disclosing a microplate that has lifting elements (springs) which are used to help remove a microplate from a thermocycler (see FIGURES 4A-4B in the '792 patent). In contrast, Ealer and Louks each describe where lubricants can be added to a thermoplastic to make it easier to extrude or inject mold a thermoplastic device but Ealer and Louks do not mention a microplate let alone a microplate made from a non-toxic surface active material and a thermoplastic material where the non-toxic surface active material has a percentage of weight relative to the thermoplastic material that was determined in order to minimize extraction of the non-toxic surface active material into the wells of the microplate during the operation of a thermocycler as claimed in the present invention. There must be some suggestion or motivation to combine the references such that they teach the desirability of the present invention, neither of which can be established in Turner, Elsener, Ealer and/or Louks. The suggestion used by the Examiner indicates that the Examiner is relying on improper hindsight to reconstruct the Applicant's invention. Accordingly, Applicants respectfully submit that the aforementioned substantial differences between Turner, Elsener, Ealer and/or Louks and the amended independent Claims 1, 11, 18 and 23 and their associated dependent Claims 3-5, 9-10, 12, 15-17, 19, 21-22, 24-25 and 28-33 are indicative of the patentability of the present invention.

Referring to dependent Claims 4-5, 12, 19 and 25, Applicants respectfully submit that Turner, Elsener, Ealer and Louks fail to disclose a non-toxic surface active material that is a surfactant let alone a surfactant that has a hydrophilic-lipophilic balance number of less than two. The Examiner indicated in the Office Action that Louks discloses a lubricant which is stearyl alcohol and then indicates that Louks suggests the use of a stearyl alcohol as a surfactant. However, Louks does not mention the term "surfactant". Moreover, Turner, Elsener and Ealer do not mention the term "surfactant". Accordingly, Applicants respectfully submit that the Examiner appeared to have used Official Notice to reject dependent Claims 4-5, 12, 19 and 25. As such, Applicants respectfully request pursuant to Section 2144.03 of the MPEP that the Examiner cite a reference or references in support of such rejections if it they are maintained in view of the present Amendment.

Referring to added dependent Claims 31 and 32, Applicants respectfully submit that Turner, Elsener, Ealer and Louks fail to disclose a non-toxic surface active material that is a solid silicone or a fluoropolymer as claimed in the present invention.

## **Conclusion**

Applicants respectfully submit that all of the stated grounds of rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicants respectfully request reconsideration of all outstanding rejections and allowance of pending Claims 1, 3-13, 15-26 and 28-33.

Enclosed is a USPTO Credit Card Payment Form filled out for \$ 416.00 to cover the fees associated with the addition of four independent Claims 6, 13, 20 and 26 and four dependent Claims 29-33. If this is incorrect, the Commissioner is authorized to charge any fees which may be required for this paper to Deposit Account No. 50-1481.

Respectfully submitted,



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